

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/063723 A1**

- (51) International Patent Classification<sup>7</sup>: **C07D 243/24**, 413/04, A61K 31/5513, A61P 25/00
- (74) Agents: **TEZIER HERMAN, Béatrice et al.**; Becker & Associés, 25, rue Louis Le Grand, F-75002 Paris (FR).
- (21) International Application Number: **PCT/IB2004/004362**
- (22) International Filing Date: 23 December 2004 (23.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 03293309.5 23 December 2003 (23.12.2003) EP
- (71) Applicant (for all designated States except US): **NEURO3D [FR/FR]**; 130, rue de la Mer Rouge, Bât. "la Fabrique" B.P. 42002, F-68058 Mulhouse Cedex 2 (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ABARGHAZ, Mustapha [FR/FR]**; 6, rue Arthur Rimbaud, F-68270 Wittenheim (FR). **BIONDI, Stefano [IT/FR]**; 3, rue du Général de Gaulle, F-68400 Riedisheim (FR). **DURANTON, Jérôme [FR/FR]**; 16, rue Schweighaueser, F-67000 Strasbourg (FR). **LIMANTON, Emmanuelle [FR/FR]**; 2B, rue des Vergers, Résidence du Haut Village, F-68720 Hochstatt (FR). **MONDADORI, Cesare [CH/CH]**; Boddenmattstrasse 10, CH-4153 Reinach (CH). **WAGNER, Patrick [FR/FR]**; 5a, rue du Château, F-67170 Brumath (FR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**  
— of inventorship (Rule 4.17(iv)) for US only
- Published:**  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **BENZO<sup>1,4</sup> DIAZEPIN-2-ONE DERIVATIVES AS PHOSPHODIESTERASE PDE2 INHIBITORS, PREPARATION AND THERAPEUTIC USE THEREOF**



(57) Abstract: The invention relates to compounds of formula (I) having PDE2 inhibitory activities, as well as therapeutic methods by administering said compounds, in particular for treating various diseases of the central or peripheral nervous system. It further deals with pharmaceutical compositions comprising said compounds and methods for preparing said compounds. Compounds of general formula (I).

WO 2005/063723 A1